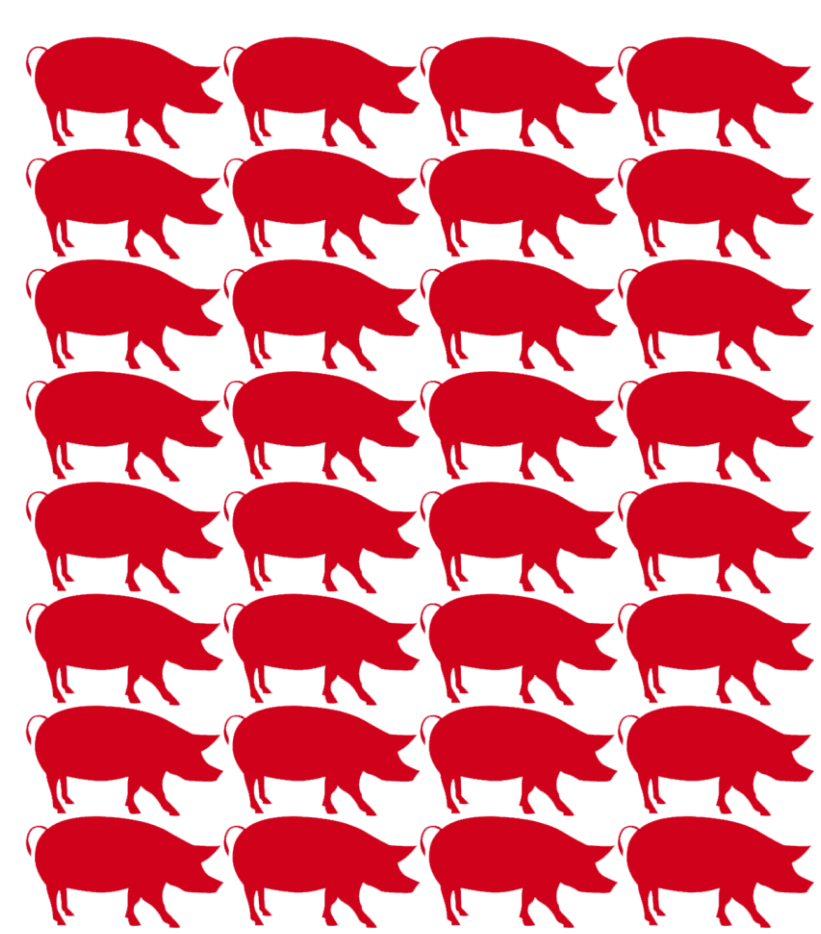




Problem



Hogs outnumber Duplin residents 32:1



Waste lagoons emit pollutants into surrounding air and water



Lagoons flood easily, causing catastrophic environmental damage



Impacts

Environmental



Public health



Air pollution

Greenhouse effect, ammonia deposition

Water pollution

Algae blooms, fish kills, dead zones

Asthma, burning eyes/lungs, sores

Gastrointestinal/kidney problems, blue baby syndrome

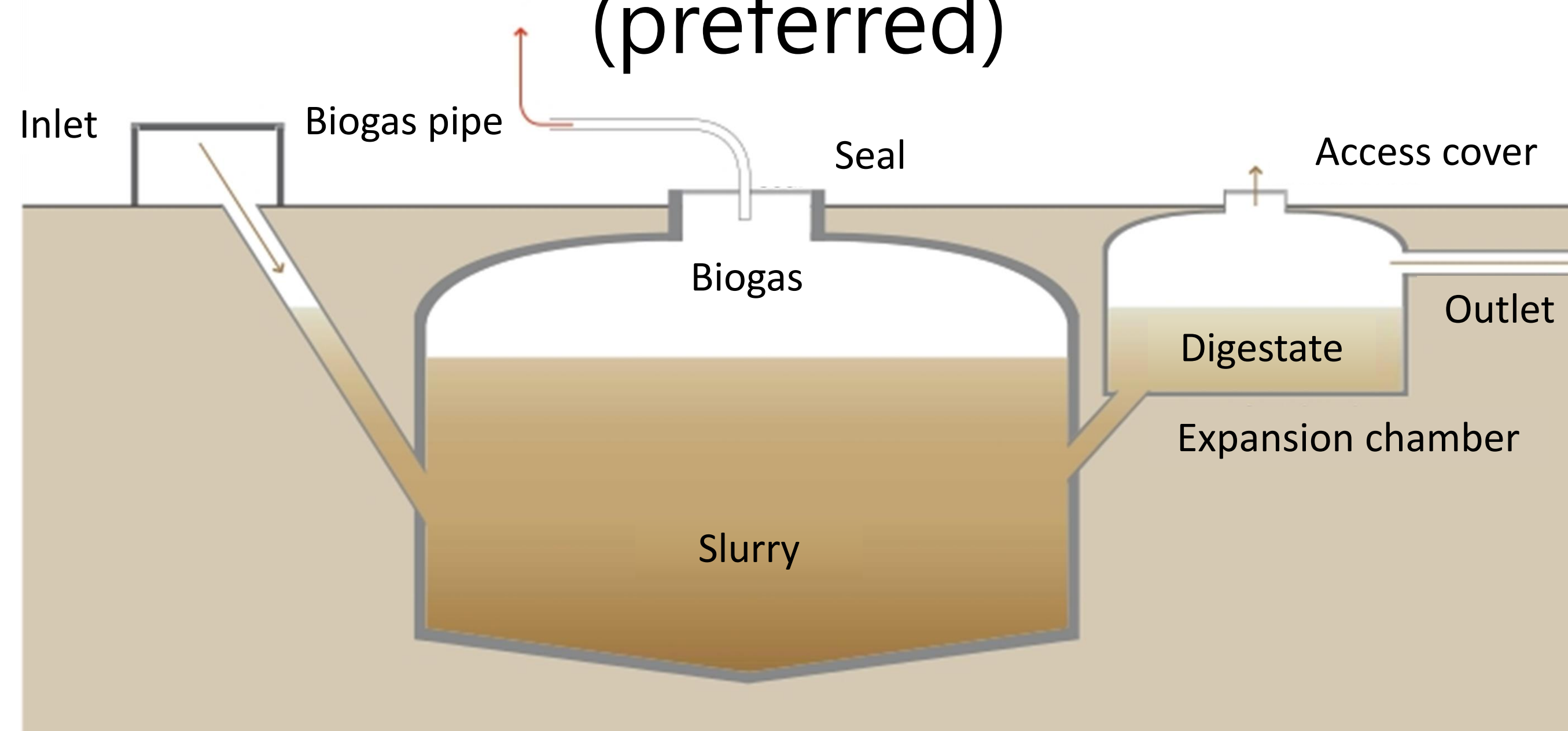
"It's basically dumping"
"My son's body was filled with sores"
"We lost [1] billion fish in just a couple of days" (Dove 2018)

Goal

To minimize the impact of hog farming on the Duplin County community and the global environment.

Solutions

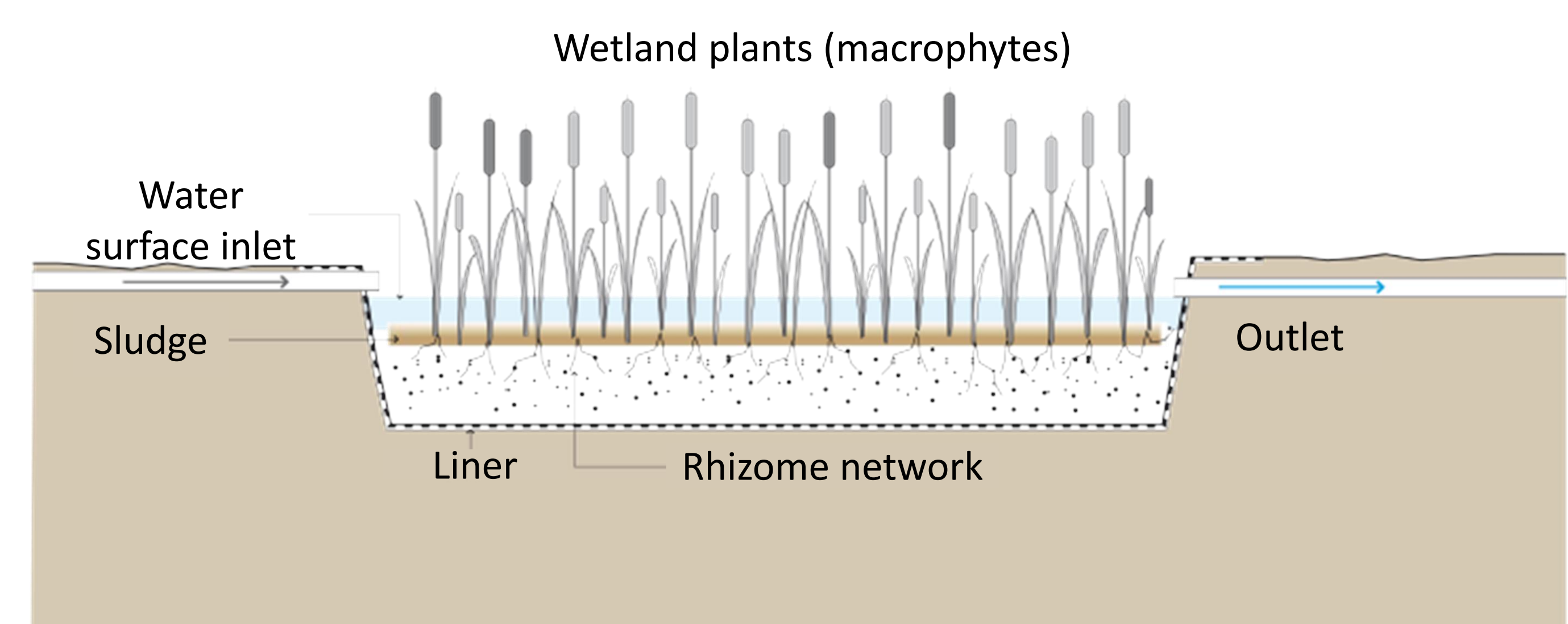
Methane Biodigester (preferred)



Breaks down compounds in the waste and stores the gases, so they can be used as fuel.

Advantages	Disadvantages
97.5% odor reduction	Expensive
Reduces methane emissions	Requires pre/post-treatment of waste
Generates electricity	

Constructed Wetland



Uses marsh plants in an impermeable liner to remove harmful contaminants from wastewater.

Advantages	Disadvantages
Low building cost	Pre-treatment needed for phosphate removal
Cheap to operate	Susceptible to flooding
	Does not combat odor

Implementation

Implement a federal green tax on pork.



Establish a subsidy for hog farms that implement environmentally superior technologies.



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